

## Claims

I claim:

1. A computer-implemented method for associating a first block diagram  
5 with a user interface element, the method comprising:  
displaying the user interface element;  
receiving user input specifying the first block diagram to associate with the user  
interface element, wherein the first block diagram includes a plurality of nodes visually  
indicating functionality of the user interface element; and  
10 associating the first block diagram with the user interface element, wherein the  
first block diagram is operable to control functionality of the user interface element.
2. The method of claim 1,  
wherein the user interface element comprises one of:  
15 a user interface control; or  
a user interface indicator.
3. The method of claim 1,  
wherein the first block diagram comprises a plurality of interconnected nodes that  
20 visually indicate functionality of the user interface element.
4. The method of claim 1, wherein said receiving user input specifying the  
first block diagram comprises:  
arranging the plurality of nodes on a display; and  
25 interconnecting the plurality of nodes in response to user input.
5. The method of claim 1,  
wherein the first block diagram comprises a graphical data flow diagram.

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6. The method of claim 1, further comprising:  
including the user interface element in a program in response to user input;  
executing the program; and  
the first block diagram controlling functionality of the user interface element  
5 during execution of the graphical program.

7. The method of claim 6, wherein said executing the program comprises:  
displaying the user interface element;  
receiving user input to the user interface element during execution of the program;  
10 and  
the first block diagram controlling functionality of the user interface element in  
response to the user input received to the user interface element.

8. The method of claim 6, further comprising:  
15 displaying the first block diagram after said including the user interface element in  
the program.

9. The method of claim 6, further comprising:  
receiving user input for editing the first block diagram after said including the  
20 user interface element in the program; and  
editing the first block diagram in response to the user input for editing the first  
block diagram;  
wherein said editing the first block diagram comprises changing how first block  
diagram controls functionality of the user interface element.

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10. The method of claim 1, further comprising:  
receiving user input to the user interface element; and  
the first block diagram responding to the user input received to the user interface  
element to control functionality of the user interface element.

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11. The method of claim 10,  
wherein the user input received to the user interface element is for interactively  
operating the user interface element without requiring execution of a program to operate  
5 the user interface element.

12. The method of claim 1, further comprising:  
including the user interface element in a graphical program in response to user  
input;  
10 executing the graphical program; and  
the first block diagram controlling functionality of the user interface element  
during execution of the graphical program.

13. The method of claim 12,  
15 wherein the graphical program includes a second block diagram;  
wherein the second block diagram is separate from the first block diagram.

14. The method of claim 13,  
wherein the first block diagram is accessible from the second block diagram.  
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15. A computer-implemented method for including a user interface element in  
a graphical program, the method comprising:  
receiving user input specifying inclusion of the user interface element in the  
25 graphical program, wherein the user interface element has an associated block diagram;  
including the user interface element in the graphical program in response to the  
user input;

wherein said including the user interface element in the graphical program comprises including the block diagram associated with the user interface element in the graphical program;

wherein, during execution of the graphical program, the block diagram associated with the user interface element is operable to control functionality of the user interface element.

16. A computer-implemented method for creating a compound user interface control, the method comprising:

displaying a plurality of user interface elements;

receiving user input specifying a first block diagram to associate with the plurality of user interface elements, wherein the first block diagram includes a plurality of nodes visually indicating functionality of the plurality of user interface elements; and

associating the first block diagram with the plurality of user interface elements, wherein the first block diagram is operable to control functionality of the plurality of user interface elements.

17. The method of claim 16,

wherein the plurality of user interface elements comprises a plurality of primitive user interface controls provided by an application development environment.

18. A computer-implemented method for executing a graphical program, the method comprising:

receiving user input to a user interface element of the graphical program, wherein the user interface element has an associated block diagram;

executing the block diagram associated with the user interface element;

wherein said executing the block diagram comprises controlling functionality of the user interface element in response to the user input to the user interface element.

5           19.     A memory medium for associating a first block diagram with a user interface element, the memory medium comprising program instructions executable to:

display the user interface element;

receive user input specifying the first block diagram to associate with the user interface element, wherein the first block diagram includes a plurality of nodes visually  
10     indicating functionality of the user interface element; and

associate the first block diagram with the user interface element, wherein the first block diagram is operable to control functionality of the user interface element.

20.     The memory medium of claim 19,  
15     wherein the first block diagram comprises a plurality of interconnected nodes that visually indicate functionality of the user interface element.

21.     The memory medium of claim 1, further comprising program instructions executable to:

20     include the user interface element in a program in response to user input; and execute the program;

wherein the first block diagram is operable to control functionality of the user interface element during execution of the graphical program.

25           22.     The memory medium of claim 21, wherein said executing the program comprises:

displaying the user interface element;

receiving user input to the user interface element during execution of the program;

and

wherein the first block diagram is operable to control functionality of the user interface element in response to the user input received to the user interface element.

23. The memory medium of claim 19, further comprising program instructions  
5 executable to:

receive user input to the user interface element;

wherein the first block diagram is operable to respond to the user input received to the user interface element to control functionality of the user interface element.

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24. A memory medium for including a user interface element in a graphical program, the memory medium comprising program instructions executable to:

receive user input specifying inclusion of the user interface element in the graphical program, wherein the user interface element has an associated block diagram;

15 include the user interface element in the graphical program in response to the user input;

wherein said including the user interface element in the graphical program comprises including the block diagram associated with the user interface element in the graphical program;

20 wherein, during execution of the graphical program, the block diagram associated with the user interface element is operable to control functionality of the user interface element.

25 25. A memory medium for executing a graphical program, the memory medium comprising program instructions executable to:

receive user input to a user interface element of the graphical program, wherein the user interface element has an associated block diagram;

execute the block diagram associated with the user interface element;

wherein said executing the block diagram comprises controlling functionality of the user interface element in response to the user input to the user interface element.

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